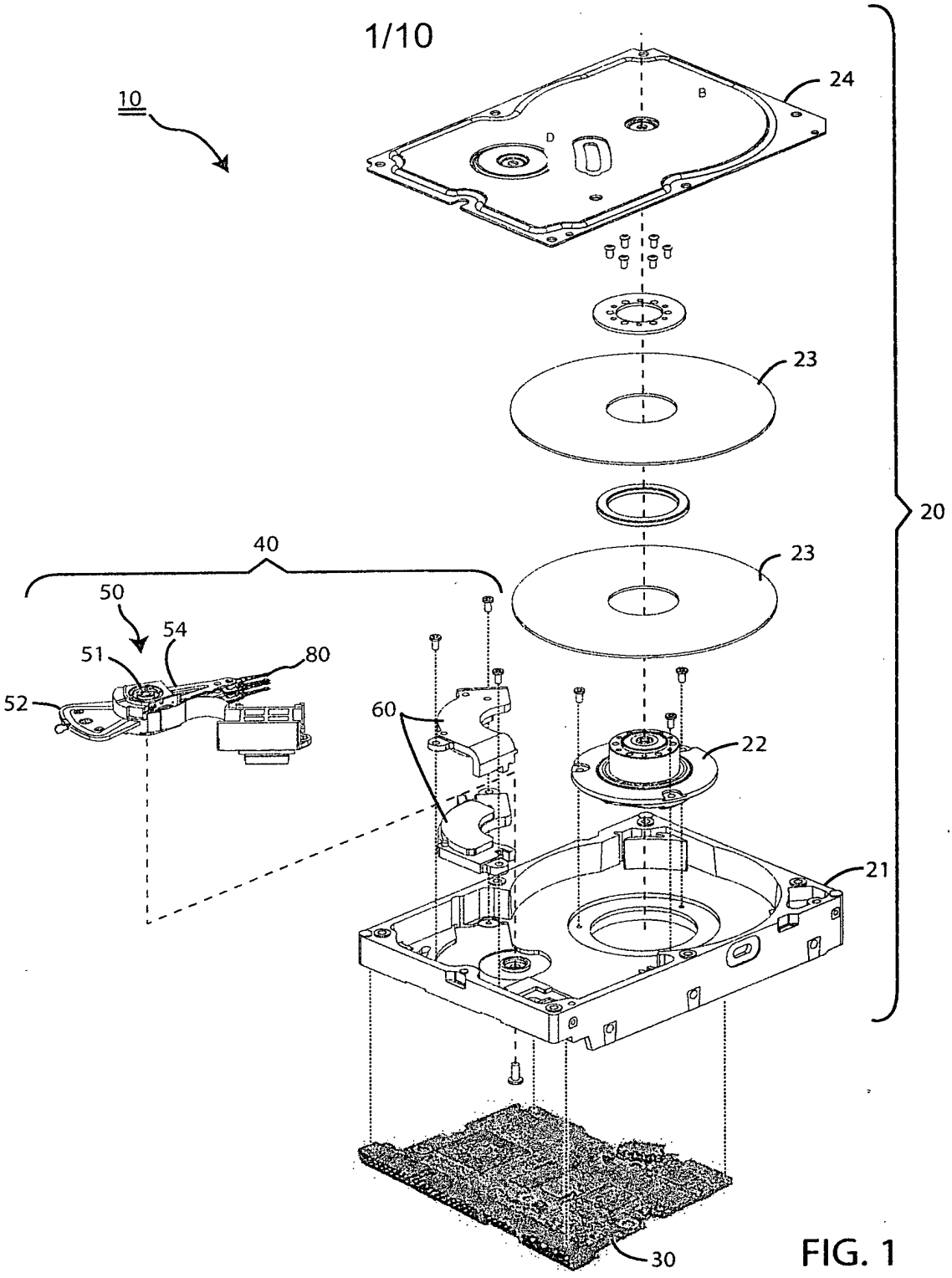


FIG. 1

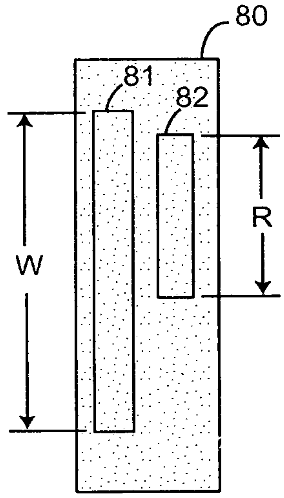


FIG. 2

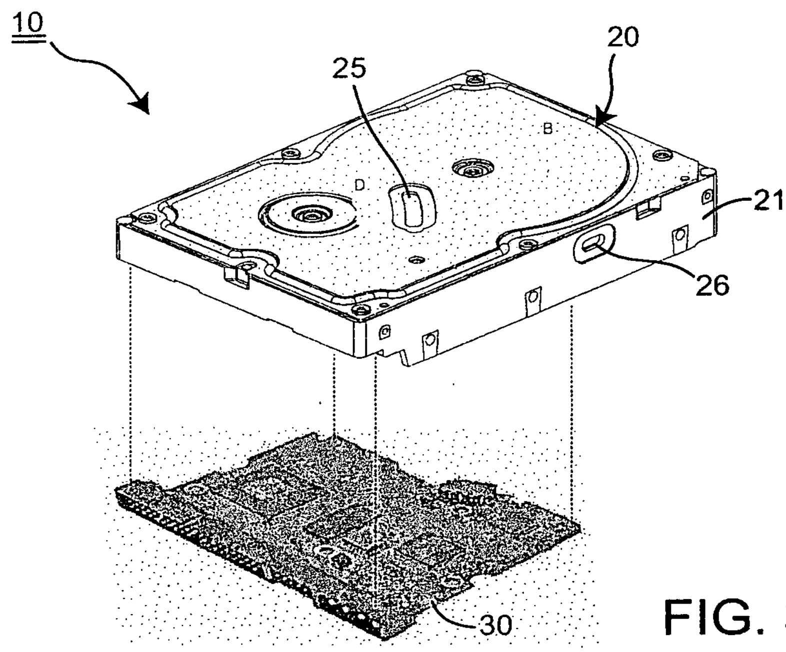


FIG. 3

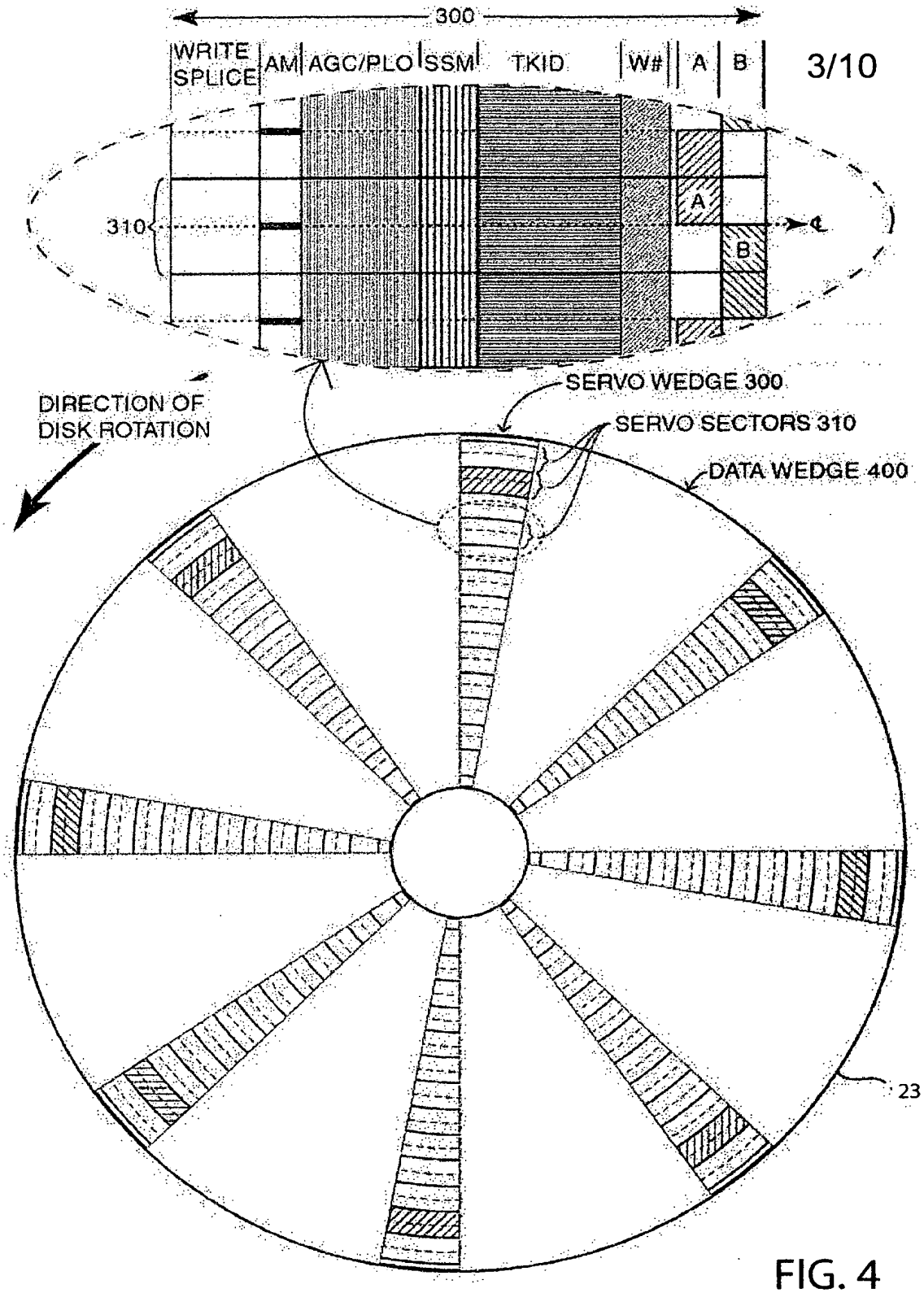


FIG. 4

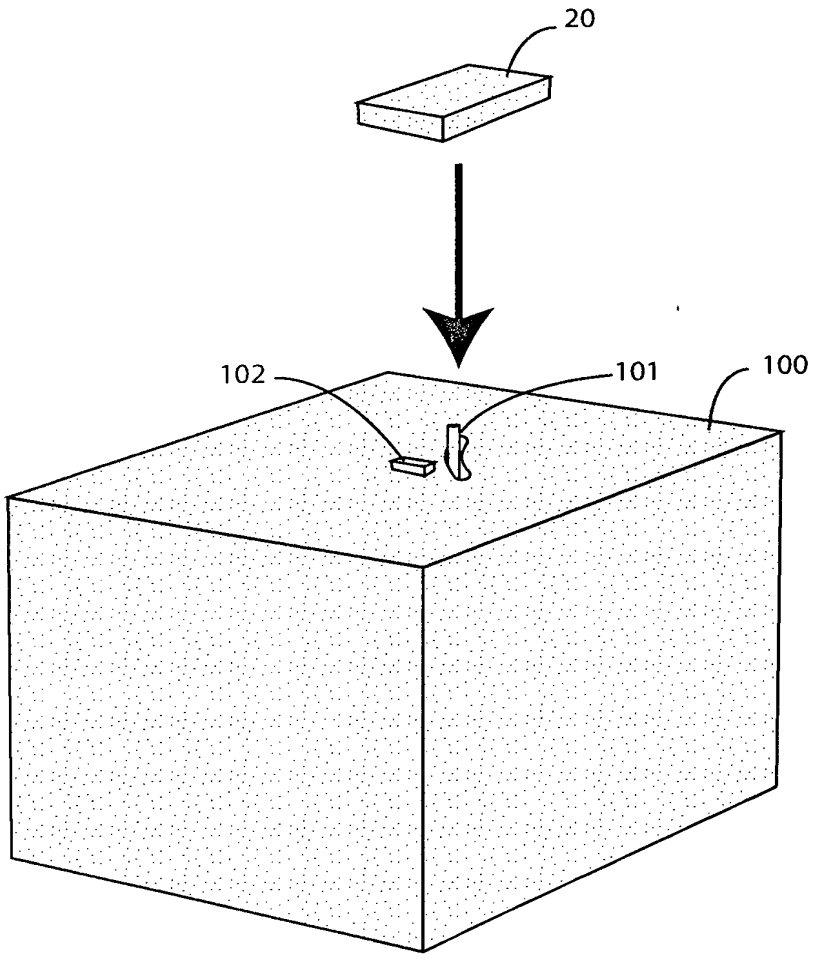


FIG. 5

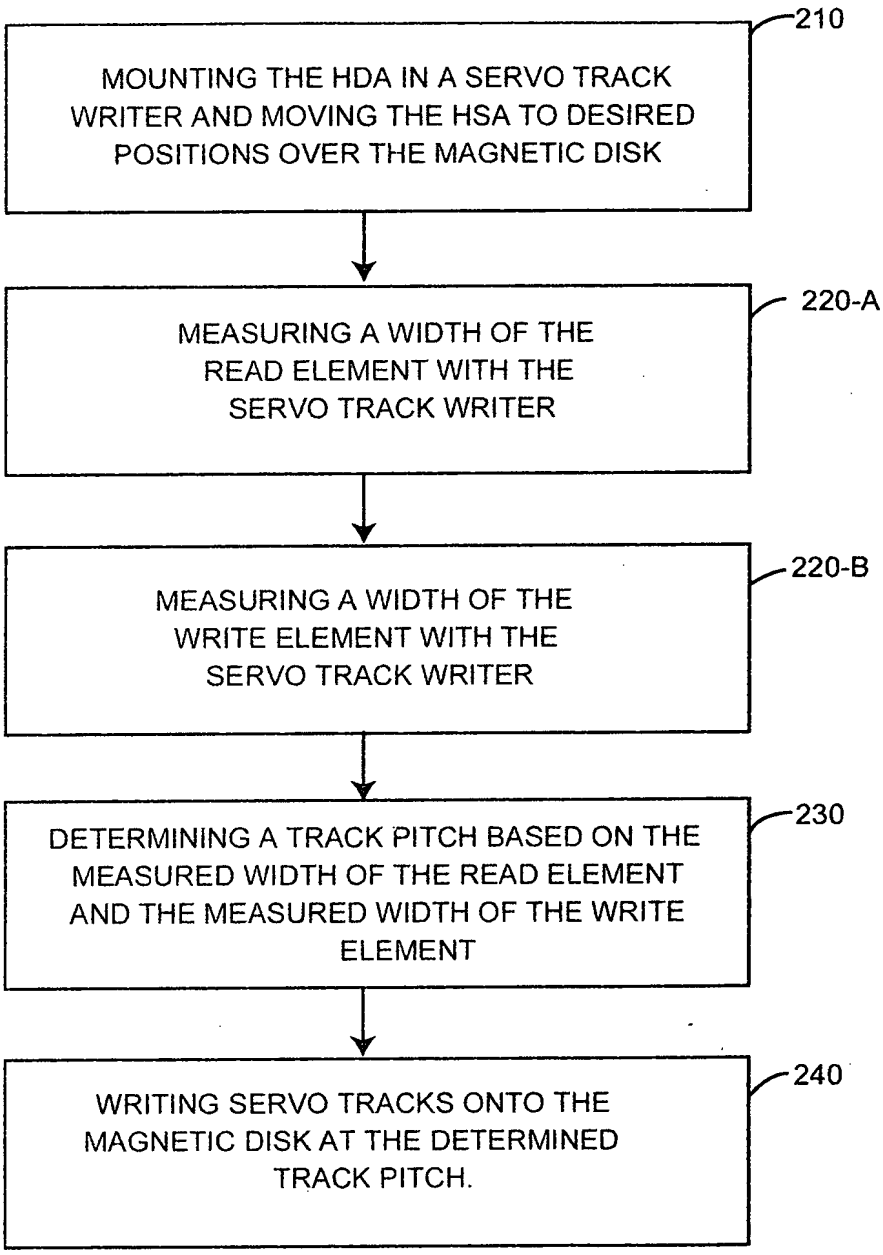


FIG. 6

221: WRITE A TEST TRACK WITH THE HEAD'S WRITE ELEMENT 81 OF UNKNOWN WIDTH "W

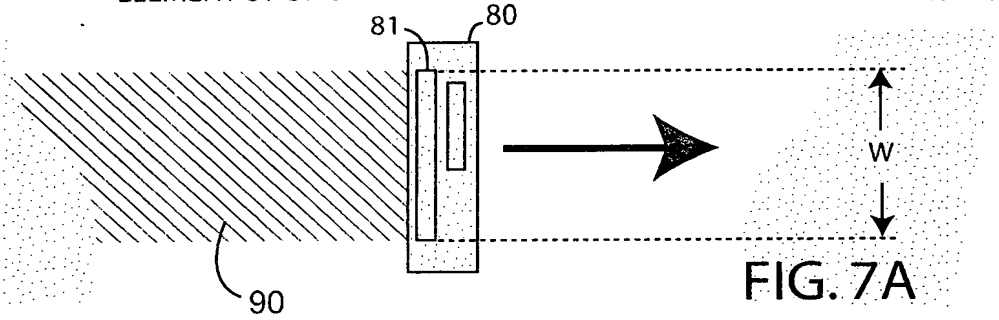


FIG. 7A

222: MOVE RADIALLY AWAY AND READ THE TEST TRACK OF UNKNOWN WIDTH "W" WITH THE HEAD'S READ ELEMENT 82 OF UNKNOWN WIDTH "R" WHERE

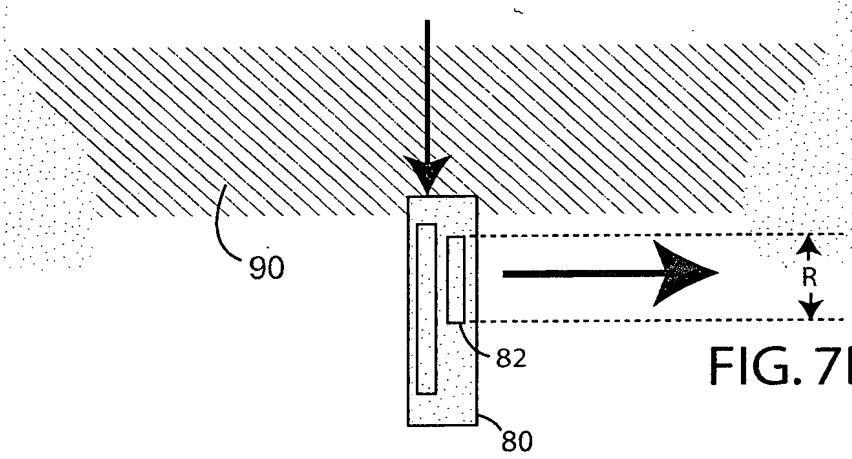


FIG. 7B

223: REPEATEDLY MOVE BACK A LITTLE AT A TIME AND READ THE TEST TRACK TO DEVELOP A CONVOLUTION OF MAGNITUDE DATA THAT RAMPS UP, FLATTENS OUT AND RAMPS DOWN

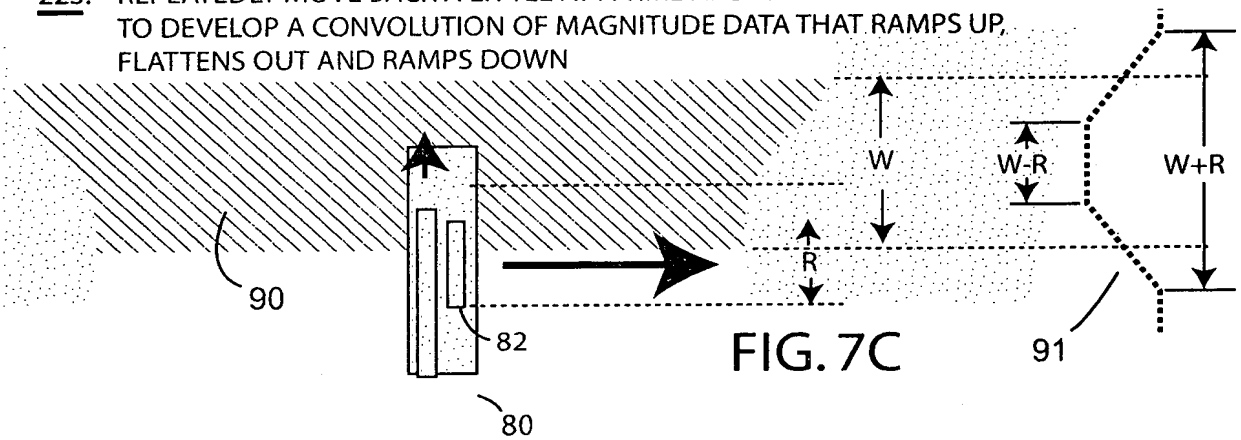
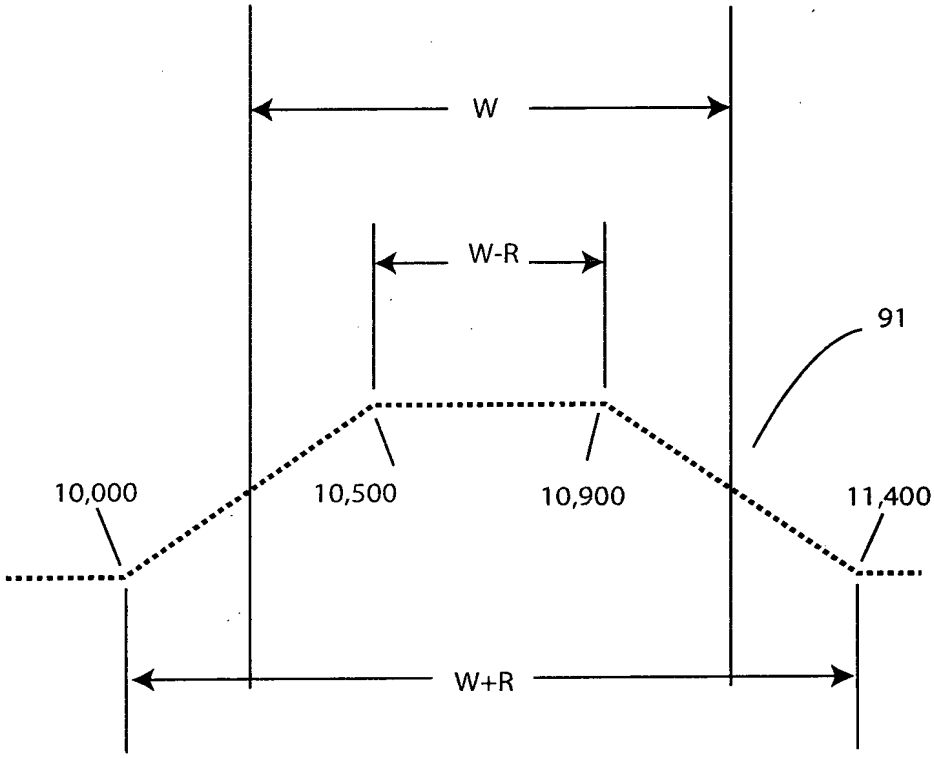


FIG. 7C

224: CALCULATE THE WIDTHS R AND W USING THE STW'S COUNT VALUES



IF W-R=400 AND W+R=1,400
THEN W=900 AND R=500

FIG. 7D

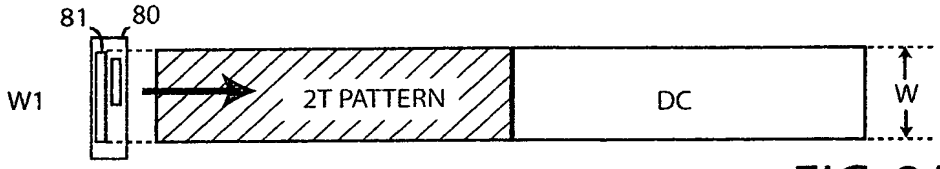


FIG. 8A

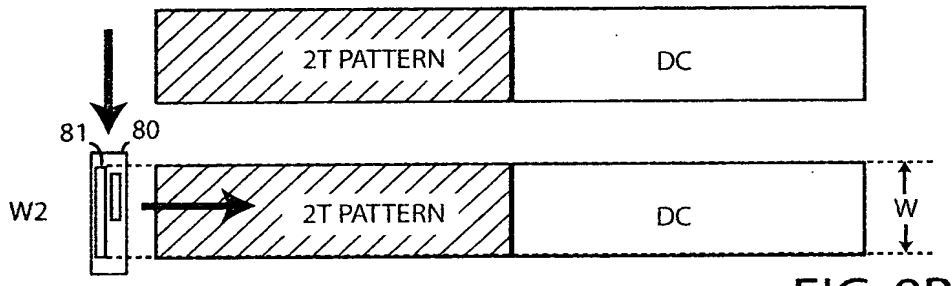


FIG. 8B

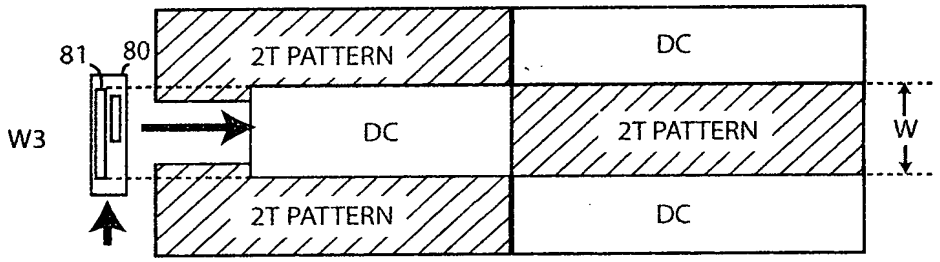


FIG. 8C

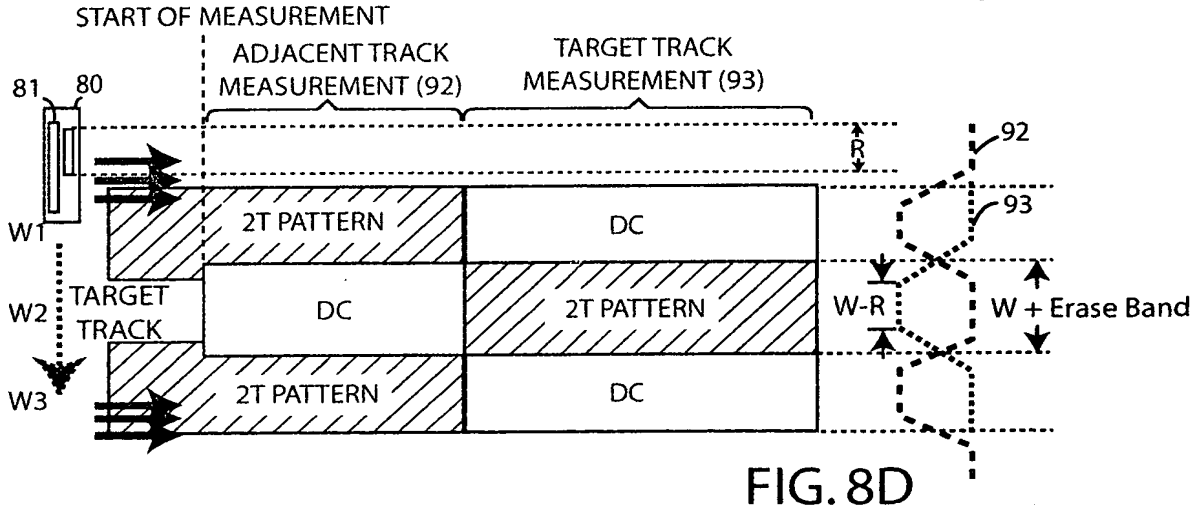
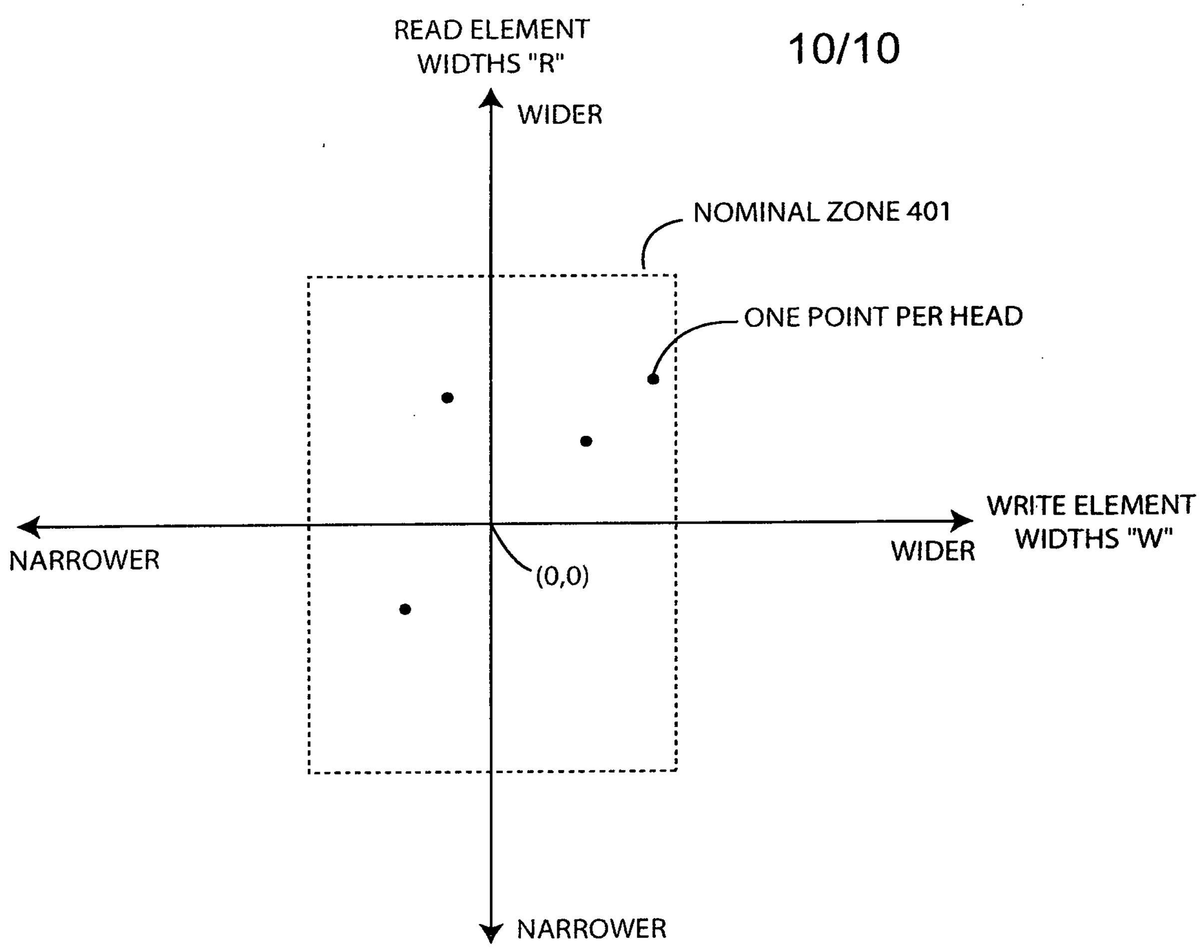


FIG. 8D

	WIDE WRITER	NOMINAL WRITER	NARROW WRITER
WIDE READER	LOW TPI	LOW TPI	LOW TPI
NOMINAL READER	LOW TPI	NOMINAL TPI	HIGH TPI
NARROW READER	LOW TPI	HIGH TPI	HIGH TPI

FIG. 9



NARROWER TRACK PITCH IMPLEMENTD

NOMINAL TRACK PITCH IMPLEMENTED

WIDER TRACK PITCH IMPLEMENTED

FIG. 10